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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,424	12/10/2003	Makoto Oikawa	1232-5227	2119

27123 7590 08/02/2007

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EXAMINER	
KHAN, USMAN A	
ART UNIT	**PAPER NUMBER**
2622	
MAIL DATE	**DELIVERY MODE**
08/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/733,424	OIKAWA, MAKOTO	
	Examiner	Art Unit	
	Usman Khan	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2007 and 24 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2003 and 24 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed on 05/22/2007 and 05/24/2007 with respect to claims 1 – 3 have been considered but are not persuasive.

Regarding objection to specification provided in the previous office action for not providing a descriptive title. Applicant has amended the title of the invention to overcome the objection to the specification.

Regarding rejection of claims 3 and 4 under 35 U.S.C. 101 because the claimed invention was directed to non-statutory subject matter provided in the previous office action. Applicant has amended claim 3 and canceled claim 4 of the invention to overcome the 35 U.S.C. 101 rejections.

Please refer to the following office action, which clearly sets forth the reasons for non-persuasiveness.

In response to applicant's argument that in claims 1:

Regarding **claims 1**, Applicant argues that Sasakura neither recites nor implies any relationship between the shift amount and width of the pupil. Therefore, Sasakura cannot perform the shading correction as recited in at least the claimed invention, even if Applicants were to concede that "it is inherent that the shifted light will be limited by the pupil" as set forth by the Examiner.

However the examiner notes that as mentioned in the previous office action Sasakura teaches a first photoelectric conversion element array and a second image signal (Figure 4; column 2 lines 28 *et seq.*) which is an image signal from the second photoelectric conversion element array in accordance with a position of a focus detection area in an image sensing frame on the basis of a ratio between a shift amount of a focus detection opening pupil (figures 3 and 4; column 2 lines 28 *et seq.*), formed when limitation is imposed by an exit window of the photographing optical system, with respect to an optical axis (it is inherent that the light inputted will be limited by the pupil), and a width of the focus detection opening pupil (it is inherent that the shifted light will be limited by the pupil).

Further, the examiner notes as a further explanation that the shifted images as discussed in figures 3 and 4; column 2 lines 28 *et seq.* has a system as shown in figure 1 which inherently has a limiting pupil i.e. exit window in the optical axis direction that will limit the light going to the image pickup sensor. Also, in figures 3 and 4; column 2 lines 28 *et seq.* has a system as shown in figure 1 which inherently has an incoming pupil at the input side which allows a limited amount of light to come in.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 2 are rejected under 35 U.S.C. 102(b) as being anticipated by the background teachings of Sasakura (US patent No. 5,995,144).

Regarding **claim 1,** Sasakura teaches that it is well known in the art to have a focus detection device comprising: a solid-state image sensing device including a first photoelectric conversion element array which photoelectrically converts a first light beam passing through a first area of an exit pupil of a photographing optical system (figure 2 and column 1 liens 26 *et seq.*), and a second photoelectric conversion element array which photoelectrically converts a second light beam passing through a second area of the exit pupil which is different from the first area (figure 2 and column 1 liens 26 *et seq.*); and a computing device which detects a focus state of the photographing optical system by computing a correlation between a first image signal which is an image signal from the first photoelectric conversion element array and a second image signal (Figure 4; column 2 lines 28 *et seq.*) which is an image signal from the second photoelectric conversion element array in accordance with a position of a focus detection area in an image sensing frame on the basis of a ratio between a shift amount of a focus detection opening pupil (figures 3 and 4; column 2 lines 28 *et seq.*), formed when limitation is imposed by an exit window of the photographing optical system, with respect to an optical axis (it is inherent that the light inputted will be limited by the pupil), and a width of the focus detection opening pupil (it is inherent that the shifted light will be limited by the pupil).

Regarding **claim 2,** Sasakura teaches that it is well known in the art to have a focus detection method wherein a first light beam passing through a first area of an exit pupil of a photographing optical system is photoelectrically converted by a first photoelectric conversion element array (figure 2 and column 1 liens 26 *et seq.*), a second light beam passing through a second area of the exit pupil which is different from the first area is photoelectrically converted by a second photoelectric conversion element array (figure 2 and column 1 liens 26 *et seq.*), and a focus state of the photographing optical system is detected by computing a correlation between a first image signal which is an image signal from the first photoelectric conversion element array and a second image signal which is an image signal from the second photoelectric conversion element array (Figure 4; column 2 lines 28 *et seq.*) in accordance with a position of a focus detection area in an image sensing frame on the basis of a ratio between a shift amount of a focus detection opening pupil (figures 3 and 4; column 2 lines 28 *et seq.*), formed when limitation is imposed by an exit window of the photographing optical system, with respect to an optical axis (it is inherent that the light inputted will be limited by the pupil), and a width of the focus detection opening pupil (it is inherent that the shifted light will be limited by the pupil).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over background teachings of Sasakura (US patent No. 5,995,144) in further view of Sasakura (US patent No. 5,995,144).

Regarding **claim 3,** Sasakura teaches that it is well known in the art to have a focus detection method wherein a first light beam passing through a first area of an exit pupil of a photographing optical system is photoelectrically converted by a first photoelectric conversion element array (figure 2 and column 1 liens 26 *et seq.*), a second light beam passing through a second area of the exit pupil which is different from the first area is photoelectrically converted by a second photoelectric conversion element array (figure 2 and column 1 liens 26 *et seq.*), and a focus state of the photographing optical system is detected by computing a correlation between a first image signal which is an image signal from the first photoelectric conversion element array and a second image signal which is an image signal from the second photoelectric conversion element array (Figure 4; column 2 lines 28 *et seq.*) in accordance with a position of a focus detection area in an image sensing frame on the basis of a ratio between a shift amount of a focus detection opening pupil (figures 3 and 4; column 2 lines 28 *et seq.*), formed when limitation is imposed by an exit window of the photographing optical system, with respect to an optical axis (it is inherent that the light inputted will be limited by the pupil), and a width of the focus detection opening pupil (it is inherent that the shifted light will be limited by the pupil).

However, the background teachings of Sasakura fails to disclose a computer program recorded on a computer-readable medium for causing a computer to execute a focus detection method.

Sasakura, on the other hand discloses a computer program recorded on a computer-readable medium for causing a computer to execute a focus detection method.

More specifically, Sasakura discloses in column 4 lines 25 – 37 and in column 5 line 65 – column 6 line 28 that the focus detection method operation controls are sent from a medium to a processor for focusing and correcting.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the background teachings of Sasakura with the teachings of Sasakura to free the resources in the E^2PROM as taught in column 5 line 51 – column 6 line 28.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Usman Khan
07/26/2007
Patent Examiner
Art Unit 2622

DAVID OMETZ
SUPERVISORY PATENT EXAMINER